

SYSTEM AND METHOD FOR CONTROLLING THE TEMPERATURE AND
INFRARED SIGNATURE OF AN ENGINE

ABSTRACT OF THE DISCLOSURE

A system and method for cooling at least a portion of an engine are provided. The engine is cooled using a fuel, such as a high heat sink fuel, that is subsequently used for combustion in the engine. The fuel can be used to cool one or more of the gases and/or components in the engine, thereby cooling the engine including an exhaust nozzle. For example, the fuel can be circulated through one or more heat exchanging devices that are disposed inside or outside a passage of the engine, and the fuel can absorb thermal energy from the engine or air that flows in the engine passage. In any case, the cooling of the engine can result in a reduction to the infrared signature of the engine.

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